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ABSTRACT

This document presents four case studies illustrating how selected high schools from across the country have implemented the career academy model schoolwide. The case studies profile the career academies of the following schools: (1) Ben Franklin High School (Philadelphia, Pennsylvania); (2) Oak Grove High School (San Jose, California); (3) South Grand Prairie High School (Grand Prairie, Texas); and (4) West High School (Columbus, Ohio). All four case studies focus on the following aspects of schoolwide implementation of career academies: (1) creating small learning communities (deciding whether all academies should have career themes; how teachers and students should be recruited or assigned to academies; deciding how many academies to have; and the pros and cons of belonging to the academy versus to the school); (2) curriculum and teaching to prepare students for college and careers (academy leaders' responsibilities in relation to administrators and counselors and relating career themes to rigorous, standards- based curriculum); and (3) work-based and experiential learning tied to classroom studies (achieving economies of scale in work-based and experiential learning and modifying the design of work-based and experiential learning to accommodate larger numbers of students). Concluding the document are a self-assessment guide for career academies and companion guidelines for analyzing student data. (MN)

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University of California at Berkeley

Implementing Career Academies Schoolwide

Four Case Studies

David Stern, Charles Dayton,
Robert Lenz, and Susan Tidyman

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David Stern, Charles Dayton,
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University of California, Berkeley
Graduate School of Education
Berkeley, CA 94720-1674

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IMPLEMENTING CAREER ACADEMIES SCHOOLWIDE

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IMPLEMENTING CAREER ACADEMIES SCHOOLWIDE

I. Introduction: Focusing on Implementation

This is the second in a series of papers about the use of the career academy model schoolwide in high schools. Since the mid-1990s a small but growing number of high schools and districts have been trying to improve student engagement and achievement by enrolling all students in career academies. These efforts have been inspired in part by strong evidence that career academies improve students' performance in school.[1]

A paper released in August 2000, entitled "Issues in Schoolwide Application of Career Academies," identified a set of questions that arise when the academy model is generalized schoolwide, instead of serving only a small fraction of students in a larger high school as the model was originally designed. The questions were grouped under three major headings that correspond to the three key elements in the definition of a career academy:

A. Creating Small Learning Communities

- *A.1. Should all academies have career themes?*
- *A.2. How should teachers be recruited or assigned to academies?*
- *A.3. How should students be recruited or assigned to academies?*
- *A.4. How many academies should there be?*
- *A.5. Belonging to the academy versus belonging to the school.*

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[1] Kemple, J. J. and Snipes, J.C. (2000). *Career Academies: Impacts on Students' Engagement and Performance in High School.* New York: Manpower Demonstration Research Corporation.
Stern, D., Dayton, C., and Raby, M. (2000) *Career Academies: Building Blocks for Reconstructing American High Schools*, Berkeley, CA: Career Academy Support Network, Graduate School of Education, University of California. http://casn.berkeley.edu
Maxwell, N.L. (1999). *Step to College: Moving from the High School Career Academy Through the Four-Year University.* Berkeley, CA: National Center for Research in Vocational Education, University of California. See also Maxwell, N.L. and Rubin, V. (2000): *High School Career Academies: A Pathway to Educational Reform in Urban Schools?* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

B. Curriculum and Teaching to Prepare Students for College and Careers

B.1. What are the responsibilities of academy leaders in relation to the principal, vice principals, department heads, and counselors?

B.2. How can academies effectively relate their career themes to rigorous, standards-based curriculum?

C. Work-Based and Experiential Learning Tied to Classroom Studies

C.1. How to achieve economies of scale in work-based and experiential learning?

C.2. Modifying the design of work-based and experiential learning to accommodate larger numbers of students.

Sections II through V of this paper describe how four high schools are responding to these questions in practice.[2] Each has decided to transform itself into a set of smaller learning communities with career-related themes. They are:

- Benjamin Franklin High School in Philadelphia, PA
- Oak Grove High School in San Jose, CA
- South Grand Prairie High School in Grand Prairie, TX
- West High School in Columbus, OH

The information on which this paper is based came from a series of visits to each school, seminars involving representatives from the four schools, school documents, and conversations with school staff members at conferences and by telephone and email. Each section has been reviewed by staff at the site for accuracy. These visits, seminars, and other contacts are part of a process in which the Career Academy Support Network is attempting to help the schools implement their plans.

Implementation continues to be a critical issue for career academies, whether the model is used schoolwide or only in part of a high school. The

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[2] Each of these section ends by briefly highlighting a promising practice at each school. The next paper in this series, to be released in August 2002, will describe these and other promising practices more fully, as a guide to other schools that are applying the all-academy strategy or using career academies along with other kinds of smaller learning environments as part of a schoolwide reform strategy.

Manpower Demonstration Research Corporation (MDRC) has been conducting an important evaluation of nine career academies that comprised only small parts of their host high schools.[3] In that evaluation, the measured impact of career academies on high school graduation and some other important outcomes has been small and not always statistically significant. This finding raises the question whether the impact would have been greater if these high schools had implemented the academy model more thoroughly. It may not be possible to answer that question in the context of the MDRC evaluation, but it is possible to pay closer attention to implementation of career academies in other contexts.

In any school or district that is operating career academies, it is important to monitor how well each element of the model is implemented, in addition to measuring student outcomes. If student performance does not improve, it is then possible to check whether the model was implemented properly. And if student performance does improve, it is possible to check whether the amount of improvement is correlated with how completely the model is implemented. This kind of comparison requires information from more than one academy. Section VI of this paper outlines some simple procedures that can be used to monitor both the degree of implementation and changes in student performance. If this information becomes available for larger numbers of academies, it will add significantly to understanding the effectiveness of the career academy model.[4]

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[3] See Kemple and Snipes reference in footnote 1. The MDRC study is important because it randomly assigned students to academies and control groups. This is rare in large-scale educational research, but is the only way to eliminate possible bias due to certain kinds of students being selected into the program.

[4] This information can be useful even if there is selection bias. That is, even if academies generally select students who possess relatively high levels of motivation or some other favorable but unmeasured characteristics, a finding that degree of implementation is correlated with amount of improvement in student performance would indicate that the model is effective — unless the better-implemented academies are also more selective.

II. Ben Franklin High School, Philadelphia

Overview

Located in the heart of the city of Philadelphia, Ben Franklin High School serves approximately 1500 students and offers a comprehensive curriculum to grades 9 to 12. One hundred percent of Franklin's students receive free or reduced lunch. Ninety-five percent are African American, 3.5% Latino, and 1.5% white. The average daily attendance at Franklin is 71%. The current annual drop out rate is 30%.

Small Learning Communities (SLC) have a long history at Ben Franklin High School. In 1990, Dr Cassandra Jones with the support of The Philadelphia High School Academies, Inc. began The Academy for Fitness, Health Promotion and Sports Education. The Fitness Academy would become a model for future SLC's at Franklin and in the School District of Philadelphia. In 1993, with a new administration at the helm, Franklin divided the rest of the school into SLC's as an intervention to improve school safety and address school climate issues.

In 1995, the new Superintendent, David Hornbeck introduced a comprehensive school district reform and restructuring called *Children Achieving*. A key part of the *Children Achieving* agenda was to organize schools into small learning communities of 200 to 500 students. Beginning with the1995-96 school year, the District identified six high schools, six middle schools and six elementary schools to be the first group of campuses of small learning communities. Franklin was part of the first cohort. Subsequently, all schools moved to this mode of operation. The vision and mission of *Children Achieving* drove the whole school reform effort at Franklin for the next four years.

The *Children Achieving* agenda attempted to create a system with:

Learning communities characterized by:

- Children who are learning at high levels and graduates who succeed in work and post-secondary education;

- Teachers who guide, coach and prompt students, and feel engaged in a challenging intellectual endeavor in which they make important decisions and accept responsibility;
- Technology that expands the classroom walls;
- Teaching and assessment strategies that emphasize intellectual accomplishment.

Schools characterized by:

- High expectations for all students;
- Parents who are involved and active at every level;
- An emphasis on high quality, nurturing relationships;
- Comprehensive support for the whole child;
- Time for teacher collaboration and reflective practice.

As part of *Children Achieving*, Franklin re-organized the SLC's to increase the connections to careers and to have the focus of the SLC's match the vision of *Children Achieving*. Ben Franklin has six floors plus a basement. Consequently, each of the SLC's occupies a different floor. Each SLC also has a coordinator who is given release time to oversee and support the program of his or her SLC. The six SLC's at Ben Franklin are:

- *Communities-In-Schools (CIS)*- nurtures the social and scholastic needs of students. The program emphasizes human growth and development and peer leadership.
- *The Academy for Fitness, Health Promotion And Sports Education (Fitness)*- offers learning experiences and training in the areas of recreation, health education, sports medicine, coaching and officiating.
- *Hotel, Restaurant and Tourism (HTR)* - prepares students for many career opportunities in the hospitality industry. HRT uses an integrated curriculum to ready students to compete in an internationally competitive labor market.
- *Motivation and Finance Academy* - includes a traditional college preparatory curriculum with a strong cultural activity component. This SLC is for students interested in becoming scientists, engineers, doctors, lawyers and researchers. It is now joined with *The Academy Of Finance*, a NAF academy

begun to respond to the employment demands of the expanding financial services industry.

- *Law & Public Service (LPS)* - developed to provide opportunities for students to gain the basic academic credits necessary for college while developing the skills needed to be successful in the world of work.
- *Maritime Commerce & Trade (MCT)* - incorporates the major elements of a business curriculum with those businesses and related services that influence the Port of Philadelphia.

The current administration began in 1998. The last three years have seen remodeling and improvements in the school building and an influx of technology. They have also brought a tremendous amount of staff turnover. Franklin struggles to provide qualified teachers and good instruction for their students. The lack of qualified staff restricts their ability to provide some learning opportunities on-site for students (e.g., foreign language). Obviously, the lack of consistent staff impacts the sustainability of any professional development and team building in SLC's.

Beginning in fall 2001, Ben Franklin will become a Talent Development High School. It will begin the Freshman Success Academy and consolidate its six SLC's into four: Law and Public Service will be absorbed into Communities in Schools; Motivation Academy of Finance and Technology; Hotel, Restaurant and Tourism Academy; and Academy for Fitness, Health Promotion and Sports Education.

Issues in Creating All-Academy High Schools

A. Creating Small Learning Communities

A.1. Should all academies have career themes?

The themes for the SLC have not always been career based (e.g., Motivation) but in the implementation of the Talent Development model each of the four academies will have a career theme. Although Children Achieving called for learning communities that were organized around rigorous and relevant instructional design, Franklin's use of SLC's mainly revolves around

school climate and safety issues. The structure of the SLC's and the school building (i.e., each SLC on its own floor) allows for more control of the flow of students through the building. Through video surveillance, security personnel and vigilant SLC coordinators, students at Ben Franklin have a safe but controlled learning experience.

A.2. How should teachers be recruited or assigned to academies?

Every Ben Franklin High School teacher is assigned to a SLC. When a teacher has interest or expertise in a particular career theme, he/she is usually assigned in the SLC where their passion or skills lie. The severe teacher shortage has impacted the assignment and recruitment of teachers to the academies. Most of the original staff that created the SLC's has left. Possibly because of the strength of the SLC coordinator and the quality of the program, the staff of the Law Public Service (LPS) SLC has remained stable, although that will change with the restructure of the school.

A.3. How should students be recruited or assigned to academies?

Students are recruited in eighth grade. If they don't choose an SLC, a choice is made for them. They are assigned – often based on space availability. Generally students have little concrete information about each SLC – and the Franklin staff realizes this. Students can find out about SLCs from an annual "high school fair" at the school and a "district book." When the district sponsored a "high school fair" downtown at the convention center, the staff felt the recruiting worked more smoothly.

New students are assigned based on space "unless they have a specific request." One of the assistant principals is responsible for assigning students who transfer into Franklin. The criteria for assigning students highlight a major issue for Franklin in the school-wide application of Career Academies: students are placed in particular academies based on academic ability or arbitrary criteria, not interest. "I look at the students and their records and make a judgment about which SLC would suit them best. Fitness is for the college-bound, especially if they want to be a doctor or nurse. Finance has a nurturing director, and also offers strong academics. 'Troublesome' students with weaker academic records

are assigned to CIS or MCT or the more focused LPS." In addition, the process for changing SLC's is difficult and students are discouraged from attempting to make change.

Using a district software program called *Pathfinder*, Franklin schedules the students into cohort groups by allowing the SLC coordinator to roster his/her students. Franklin uses a 4X4 block schedule. This schedule seems to permit the scheduling of cohort groups and common planning time for SLC teachers with fewer conflicts than other types of schedules. According to SLC leads, most teachers meet during common planning time at least once a week, but because of the teacher shortage many of the other meetings are canceled as teachers need to cover other classes.

A.4. How many academies should there be?

Since school safety was a major consideration in the implementation of SLC's school wide, Franklin's building structure influenced the number of academies they originally chose to implement. The school has six floors (five main floors plus a basement). By implementing six SLC's, Franklin could keep students on one floor of the school for most of the day. In addition, this helped create a sense of a school-within-a-school. With the implementation of the Talent Development model, Franklin will continue to employ the strategy of keeping students from each SLC on its own floor. The Freshmen Success Academy and Twilight School will have their own floor also.

A.5. Is there a conflict in belonging to the academy versus belonging to the school?

Although the staff at Franklin is concerned that students identify more with their SLC and will only respond to its teachers, most students in our site visit had a sense of school pride and ownership. At the same time, many students said that they valued the family type connection they made with the students and teachers in their SLC. Even though the theme might not interest them, they were reluctant to change SLC's because of the relationships they had built.

B. Curriculum and Teaching that Prepare Students for College and Careers

B.1. *Roles and responsibilities*

The restructuring of Ben Franklin into SLC's also restructured the traditional roles and responsibilities for administrators, counselors and teacher leaders. According to the teacher manual, SCL Coordinators have been empowered by the principal to handle the following responsibilities for their SLC:

- Distribution of supplies
- Discipline
- Student attendance
- Work based learning, internships and school-to-work programs
- SLC meetings
- Classroom management

From these broad categories, the Coordinator has a detailed list of responsibilities. This structure once again reflects the principles of the district *Children Achieving* agenda. The coordinators do not feel they have enough time or support to accomplish all that is asked of them while maintaining their teaching loads.

Department heads are responsible for "distribution of texts and instructional materials, issues relating to curriculum *and* instruction, testing and grant writing and professional development. Additionally, these curriculum coordinators will provide assistance to teachers regarding lesson plans and classroom techniques." However, the department chairs and administrators admit that the SLC structure has reduced the time that department chairs spend with teachers and their influence is minimal. The administrators at Franklin feel that the emphasis on SLC's versus departments has negatively affected the level of instruction in the classroom.

Franklin has only two counselors for the entire school. They "offer advice and guidance" to the students. The SLC coordinator is responsible for all rostering and scheduling of students - not the counselors.

B.2. Teaching and Learning

Ben Franklin has identified this area as a weakness that it needs address. They chose to become a Talent Development high school because they would receive professional development and coaching for their teachers in improving instruction. Teachers admit that they do not create enough integrated or career connected learning opportunities, and students confirm this. Professional development does not occur for teams. Some teachers have participated in project-based learning training with the district, but there is little evidence of project based learning in the classrooms. The projects that students found most engaging and demonstrated the most potential originated from community partners (i.e., Miss Philly Pride; Teen Court; Communities in Schools) not the staff. As Dr. Cassandra Jones has said, "The challenge is to move from structural to instructional."

C. Work-Based and Experiential Learning Connected to Classroom Studies

C.1. How to achieve economies of scale in work-based and experiential learning?

Some students were not able to have internships in career areas of interest because of their SLC. One student wanted to study photography but was in HTR and another wanted to do Physical Therapy but was not in Fitness. Many students are not eligible to participate because of grades and credits. Teachers and cluster leaders discuss the opportunity for work-based learning as far more pervasive than it seems to actually occur.

Although no one has a precise count, by asking each SLC Coordinator we were able to estimate that 150 to 200 students participate in internships each year, or about 1/4 of the students in the 11th and 12th grades. This is substantially fewer than Franklin would like. In addition, many of the work place experiences are not academically rigorous. Many are jobs that the students already have secured previously, not related to school. SLC coordinators feel like they have been asked to implement an un-funded mandate. There are too many students and not enough support for placing and monitoring their experiences. The District originally employed "specialists" for job placement; unfortunately, budget cuts removed those positions.

C.2. Modifying the design of work-based and experiential learning to accommodate larger numbers of students.

Teachers describe three different types of experience: work-based, service learning and multi-disciplinary experiences. In Fitness the students described meaningful internship experiences. In HRT, they work with Miss Philly Pride Lady and the Spring Garden Project. These are good examples of how external volunteers can make service learning happen. LPS seems to have the most comprehensive system, with multiple types of adult connections. Many students are using existing paid jobs for their work experience.

Students are also aware of their senior project, which represents another possibility for applied learning in the workplace. They report that teachers have been talking about it since they were in the ninth grade. Unfortunately for most students it seems unclear how their senior project relates to their work place experience or to their studies.

In theory, Ben Franklin and the school district's SLC structure should support going to scale with workplace experiences. Each school has a cluster leader who is responsible for assisting the SLC coordinators with this part of their job. In addition, each SLC has a supporting or sponsoring organization: LPS is partnered with Temple Law School and the Bar Association, the Communities in Schools SLC is sponsored by the national Communities-in-Schools organization; Fitness and HRT are linked to The Philadelphia High School Academies; MCT has the Port of Philadelphia; Finance has the National Academy Foundation. Unfortunately, the theory does not seem to be playing out in practice. Most of the responsibility falls to the SLC coordinator who lacks the time to develop and support from 50 to 200 internships each year.

Promising Practices

Ben Franklin High School demonstrates that structurally career academies can be implemented school-wide. Using a 4X4 block schedule and giving the responsibility for scheduling students and teachers to the SLC coordinators, Franklin has achieved the elusive goal of mostly "pure" SLC's, and of providing

all teachers in each SLC with common planning time. By placing each SLC on its own floor, they have set up ideal conditions for collaboration among teachers and the building of a learning community with the students. Although the coordinators do not have enough time to meet the demands of their job, they do have the advantage of a clearly defined job and have been empowered by the principal to make important decisions. More than any other school in our study, Ben Franklin has designed a system that breaks down the traditional hierarchy of schools and creates "schools-within-a-school." The involvement of community agencies provides partners for each SLC that also open the potential to connect every student with successful adults in the community through job shadows, mentors and internships. Perhaps the implementation of the Talent Development model will help Franklin move from "structural success to instructional success."

III. Oak Grove High School, San Jose

Overview

Located on the south side of San Jose, within Silicon Valley, Oak Grove High School is a comprehensive grade 9-12 high school that houses approximately 2,700 students. Occupying forty-three acres on a pleasant, well maintained campus, it is one of ten comprehensive high schools in the East Side Union High School District. Approximately 8% of students here are African-American, 1% American Indian, 25% Asian-American, 5% Filipino/Pacific Islander, 29% European-American, and 32% Hispanic. Approximately 18% of students are classified as Limited English Proficient; students here speak 19 primary languages. Thirty percent participate in the free/reduced lunch program. The school operates on a seven period day.

Concern about the high rate of student failure at Oak Grove High School reached a head during the 1995-96 school year, when the staff here decided something must change. They participated in a series of staff meetings to explore options that spring, and a retreat that summer in Palm Springs. A team from the UCLA School of Management helped to coordinate this retreat, led by Dr. Jim Henderson, a former high school principal. The result was a decision to restructure Oak Grove into a series of small learning communities, to be called "interest paths" (IPs). Each would have a theme, and all would have a set of clear outcome expectations as reflected in a rubric.

The 1996-97 school year became a planning year, a time when the details of the vision could be spelled out. Oak Grove already had the seeds of this new vision in place in the form of two academies: a National Academy Foundation (NAF) Academy of Travel and Tourism, and an Air force Junior ROTC. To these were added six new themes: engineering, environmental science, information technology, performing arts and communications, public service, and sports medicine, health & fitness. The idea was that each would attract a cadre of teachers who would work together with a group of students interested in the field. A seventh theme was added in 1998-99 in the form of another NAF Academy, in Business/ Finance. This brought to nine the interest paths around which the high school became structured.

At the same time it was decided to reform the administrative structure of the high school. Rather than to have a traditional principal and some number of assistant principals, the staff decided to have three directors who would share responsibility. While there was no strict division of labor among these directors, their primary responsibilities tended to fall into the categories of curriculum and instruction, facilities, and community relations. These directors would in turn work closely with an "Instructional Leadership Team" (ILT) comprised of the 16 department chairs, the nine interest path lead teachers, and representatives from the teachers' union. In addition, each director would oversee three of the interest paths. This structure is in place today.

When the staff at Oak Grove defined this structure and began its implementation, they did so with little outside financial support. The only exception was a California Partnership Academy (CPA) grant for the Academy of Travel & Tourism. When the Bay Area School Reform Collaborative came into being in 1997, Oak Grove applied for and eventually received leadership school status, enjoying support from this source. The school was also part of a districtwide literacy improvement program which brought funds. Another districtwide program designed to reduce neighborhood attendance patterns, called the Voluntary Integration Program (VIP), provided support, since the academies were open to students outside the Oak Grove attendance area. Digital high school funds came at about this time from the state, providing a surge of technological improvements. And in the 2000-2001 school year the NAF Business/ Finance Academy secured a second CPA grant from the California Department of Education (CDE).

While these influxes of financial support helped the staff to implement its vision, they did not remove all barriers. Not all teachers were enthused about the plans, and passive resistance slowed the changes. Certain subjects fit less well into the interest paths than others. One example is math, since a student's level is so much determined individually and it is difficult to integrate with other subjects at a given grade level. Certain interest path leads also had a clearer vision of the changes they wanted to make than others, and a more supportive group of teachers with whom to work. The administrators viewed the changes

as a bottom up restructuring and tried not to force change from the top down, since part of the underlying vision was shared leadership.

Staff turnover was another impediment, as new teachers each year had to be oriented to the plans, and might or might not respond enthusiastically. In just the past two years two of the three directors have been reassigned, further contributing to the turnover problem. Much of the funding gained in the past few years was also temporary and during the next year will be either in decline or gone altogether. Thus while progress toward the vision has been made, it has been incomplete and buffeted by various cross currents and head winds.

Issues in Creating All-Academy High Schools

A. Creating Small Learning Communities

A.1. Should all academies have career themes?

This remains an open question at Oak Grove High School. Partly because of some parental and student resistance to anything smacking of 'vocational' the term 'interest path' (IP) was selected to identify the themes. While most IPs have some career implications, not all do; public service, for example, has little. Whether all the IPs should have a career theme is questioned by many of the staff members. They fear such themes can cause students to make decisions too early in their high school career that may not make sense as they learn more and mature. One option would be to have some IPs with an academic theme, such as science (largely what the environmental science IP provides), or honors. Others oppose this because it could result in tracking. While there is stronger support for the idea that all IPs should have *some* theme, whether or not it is career related, even this is not universally accepted. Some teachers feel that the school would be more effective if only part of it were defined by small learning communities while the rest followed a more traditional structure. They feel this would respond more fully to the whole range of student and parent preferences in the community.

A.2. How should teachers be recruited or assigned to academies?

This has been voluntary, but while some teachers are closely associated with an IP, others aren't, and some are associated with two or even three. Several of the IPs are well formed with full sets of teachers, while others have a leader but no real team of supporting teachers. The process through which teachers have become associated with IPs has been voluntary, and there seems to be little inclination on anyone's part to force any such assignments. But one of the goals for the next year is to form clusters of IPs, three per cluster, to ease scheduling in difficult subjects such as math and single section subjects. To have real collaboration among IPs within a cluster there is a need for every teacher to be assigned somewhere. Just how this issue will be handled is not yet clear.

A.3. How should students be recruited or assigned to academies?

In 8th grade all students and their parents are asked to come to an orientation one evening, hear a brief presentation from each of the nine IPs, and make a choice. Students and parents sometimes complain about not having enough information to make a good choice, and this system is complemented by word of mouth sharing of information among students and parents, leaving some probably more informed than others and some perhaps misinformed. Teachers vary in their acceptance of this recruiting process. Some don't like to recruit, don't view themselves as salespeople, so the sign-ups tend to be uneven, with some IPs oversubscribed and others undersubscribed. Subsequent movement among IPs is theoretically possible but not always easy, as some teachers resist losing good students and some IPs lack space into which students can move.

One strategy to improve this system is a 20+ page handbook developed by the high school's Special Projects Coordinator this year that gives an overview of each IP, including its theme and the range of activities beyond normal classroom instruction typically offered within it. This handbook will be distributed in advance of the meeting night to all incoming freshman. School staff also worked actively at the end of the 2000-2001 school year to accommodate those student changes of IPs that were possible.

A.4. How many academies should there be?

Oak Grove has approximately 2,700 students. With the nine IPs, this results in an average of 300 students per IP, which seems to be in an acceptable range. But this *has* created scheduling problems, particularly in singleton and upper division courses. It is very hard to keep students with others in their IP when only a few are in a particular course. One response is a plan to cluster groups of three IPs into one "path", allowing scheduling overlaps among the three where needed, and grouping the three physically on the campus. Two such paths are planned for next year, so this is at the experimental stage. There is uneasiness with scaling back from the schoolwide approach to IPs, at least until the system has been given a full opportunity to work. Thus for the time being the current group of nine will probably remain. If the clustering system works it will probably be developed more extensively in subsequent years.

A.5. Is there a conflict in belonging to the academy versus belonging to the school?

This doesn't seem to be a serious problem at Oak Grove. There are certain rivalries among the IPs, but students don't seem to be troubled by identifying with both their interest path and the high school at large. The IP identity varies with the strength of the interest paths—the ROTC and NAF Academies seem to develop the strongest allegiances—but even here conflict with the overall school identity is not perceived as a problem.

B. Curriculum and Teaching that Prepare Students for College and Careers

B.1. Roles and responsibilities

The leadership structure described above means there is no principal, but rather three directors, each with a portion of the responsibilities usually held by a principal. There is also an Instructional Leadership Team, comprised of these three, the lead teachers from each of the nine interest paths, 16 department chairs, and approximately10 union representatives. The ILT usually meets monthly. This system is designed to be democratic, with collaborative decision making, and is less controlled by one person than in traditional structures. But it

does lead to a more complex decision making process that can frustrate teachers and administrators.

There is currently variation among IPs in how many courses are viewed as part of the sequence required for graduation, and differing views about how elaborate these sequences should be. The more mature IPs have developed fuller sequences of such courses than the newer ones. However, the career related courses don't always count for college and university entrance requirements, so some IP leads prefer to limit these. One mechanism for discussing such issues is the ILT meetings. However, some teachers feel these are not focused enough on instructional issues. They feel the time tends to be spent on structural matters — the decision making process, collaboration schedule, student scheduling — whatever the current issues are. At least some of the IP leads would like these meetings to focus more on academic issues and practices.

There also seems to be some uncertainty about who is primarily responsible for defining course structures and other directions within the IPs. Each director oversees three of the IPs, sometimes leading to confusion about whether they or the individual IP leads should initiate actions. Personalities sometimes determine what actually results. Some IP leads like playing a strong role, others look to the director for more leadership. This issue arises not only with instructional matters but in making connections with industry and community. The success of the IPs comes in part from the number and quality of activities supported by employers and the community, such as field trips, job shadowing, and internships. Someone has to develop and coordinate these, and the interplay between IP leads and directors plays a role in this.

Other relationships can also become confusing. Sometimes department heads can feel threatened by IP leads. Who should have primacy in determining curriculum and instruction is not always clear, and teachers vary in their attitude about this. Counselors tend to have their assignments defined along IP lines, which helps in scheduling students within each IP, but can create conflict in working out schedules requiring non-IP classes. Where an interest path is strong with a full quota of teachers and students and well defined activities beyond traditional instruction, the system seems to work well. Where this is not the case,

where numbers are small and activities are few, it works less well, and brings into question the value of the IP structure.

B.2. Teaching and learning at high standards.

This is viewed as a challenge still to be met by many at Oak Grove. Use of external standards as a driving force for curriculum and instruction is a relatively new concept. Teachers vary in their understanding and acceptance of this approach. Thus in practice there is a range of behavior, from those teachers who have made serious efforts to build curriculum around standards, including finding ways to incorporate curricular integration, to others who have changed little if at all in terms of curriculum and instructional methodology.

One means of furthering this goal is a new weekly scheduling variation beginning in the fall of 2001 called the 'collaboration schedule.' Each Wednesday teachers are provided an hour and 45 minute period at the end of the day—school gets out early—to allow them to meet. One of these each month is allotted to the ILT meetings, one to department meetings, and the remaining two to IP meetings. In addition the high school is applying for an Eisenhower grant intended to further this goal by bringing in professional developers expert in mapping curriculum to standards and showing teachers how to develop instruction that links academic subjects with IP themes. The new handbook may help in this regard also, as IP staff examine their course recommendations and extra activities in comparison with those of other IPs, allowing them to learn more from each other and build on successful approaches.

C. Work-Based and Experiential Learning Connected to Classroom Studies

C.1. How to achieve economies of scale in work-based and experiential learning?

In theory each IP has an advisory board from industry, although these vary in terms of activity and involvement. Likewise, the degree to which work-based and experiential learning has been developed is quite variable among the IPs. Some have done well, some almost nothing, and some are in between. The NAF Academies in Travel & Tourism and Business/Finance have gone the furthest, with business speakers, field trips, job shadowing, and students placed

in internships at the end of their junior year. The NAF Engineering Academy has also been relatively active, and the Junior ROTC Program has built-in support from the Air Force which helps. The Info. Tech., Sports Medicine, and Engineering Academies worked with Workforce Silicon Valley this year in scheduling approximately 150 students into job shadowing positions on Ground Hog Day.

To date there has been relatively little effort to coordinate such efforts across IPs, beyond those described above. However, this may change with the planned collaboration among interest paths this year, which it is hoped will allow them to pool resources and students more effectively. Two such clusters are planned: among the three NAF Academies (Travel & Tourism, Business & Finance, and Engineering), and among the Sports Medicine, Info. Tech., and Junior ROTC. The remaining three — Public Service, Performing Arts, and Environmental Studies — have not yet formed a cluster.

C.2. Modifying the design of work-based and experiential learning to accommodate larger numbers of students

At present each of the IPs has its own steering committee. As described above, these are more active in some interest paths than others. One idea being explored is to develop connections among the steering committees that have commonalties. This might extend the effects of the successful ones more widely throughout the school, increase efficiency, and eliminate duplicate approaches to companies. The clustering approach among two sets of three IPs being tried this year may help in this regard.

Promising Practices

The leadership structure described in the opening section is a unique feature of the approach at Oak Grove High School. The use of three directors and an Instructional Leadership Team dominated by teachers is an attempt to define a more democratic approach to administering a high school. This goes hand in hand with the schoolwide use of small learning communities, which also encourages teachers to play a stronger role in managing their learning

environment, developing a sense of teamwork with other teachers, and developing a more supportive climate and closer links with students.

The district role in this formulation is secondary. The district has adopted a local management approach that encourages individual high schools to take the initiative in finding ways to meet instructional goals. While it has provided financial support for various approaches, such as the literacy initiative and voluntary integration program, these supports go to all high schools in the district. However, the district is very interested in the approach Oak Grove is pursuing. One indication of this is that in designing a new high school, scheduled to open in the fall of 2002, the district is planning to structure it along lines similar to those at Oak Grove. Probably not all the interest paths will have career themes, but the idea of a shared administrative structure and a series of small learning communities that encourages teachers to take more initiative in managing their learning environment and building a supportive environment for students is viewed enthusiastically.

Some of the problems may respond to better communication. Not all the teachers appear to fully understand the underlying purposes of the interest path structure or to appreciate the advantages it can provide. Finding ways to translate practices viewed as successful in the older structure that teachers fear may be lost in the new one is another part of the challenge. As with any institution, change in high schools is difficult, uneven, and imperfect. Those changes underway at Oak Grove are innovative, exciting, and often fulfilling. They also present many challenges.

IV. South Grand Prairie High School, Texas

Overview

"South Grand Prairie High School is a suburban high school in a community of approximately 120,000 people which is located between Dallas and Fort Worth, Texas," according to the school's brochure. South Grand Prairie (SGP) is one of two high schools in the Grand Prairie Independent School District; the other is Grand Prairie High School. The SGP brochure also reports a total enrollment of approximately 2530 students, a "majority minority" mix consisting of 46 percent white, 27 percent Hispanic, 19 percent African American, 7 percent Asian, and 1 percent American Indian or other. Fourteen percent receive free or reduced price lunches, and the same number are classified as economically disadvantaged. The professional staff of 150 have an average of more than 13 years teaching experience. SGP students compete successfully in both athletic and academic tournaments.

In March 2001 SGP's principal made a presentation at the California Partnership Academies conference in Los Angeles, entitled "South Grand Prairie High School, a work in progress..." From notes and copies of overhead slides, the following account reconstructs that presentation.

SGP began its current "journey" in 1996 with a teacher-led retreat. Ten or twelve teacher leaders, now known as the Vision Team, spent two days in a "war room" at a nearby hotel. The outgoing Principal at the time challenged the group to make a "good school" into a "great school." The Assistant Principal at the time is now the school's Principal and has led this reform effort. Although the top ten percent of students were doing fine, many in the "middle majority" were dropping out or just coasting through.

The Vision Team felt that the traditional high school structure was not serving students well. Lack of connection among academic departments, or between academic departments and career/technical education — which was "not even allowed in the same building" — made it difficult for many students to find motivation and direction. The Vision Team wanted to create smaller groups in which students would have a sense of belonging and teachers would

be better able to monitor and support them. The team wanted to build a program around students' interests, to increase motivation and raise standards for student performance.

The Vision Team went on to create a five-year plan, covering 1997-98 through 2001-02. The major structural change envisioned by the plan was to group all students and teachers into five academies:

- Creative and performing arts (referred to here as Arts)
- Math, science and engineering (Math)
- Communications, humanities, and law (Humanities)
- Business and computer technology (Business)
- Health sciences and human services (Health)

Through these five academies, SGP would attempt to accomplish a newly stated mission: "To create a learning environment that promotes high academic achievement, capitalizes on student career interests and aptitudes, and encourages student involvement in order to produce responsible and successful citizens."

In his March 2001 presentation the principal commented that it was "very important for us not to have a smart academy and a not-so-smart academy." SGP is "now preparing all students for college and careers." Although not all will go to college right away if at all, the school treats all students as college bound, and every academy offers that opportunity. Special education is also part of every academy.

In the first year of its five-year journey, 1997-98, SGP launched several major changes. Teachers filled out preference sheets indicating their first and second choices of academies, as well as any academy they absolutely did not want to join. The most drastic and irreversible step came next: teachers were physically relocated so that all those in the same academy could be together in the same part of the building. A committee of teachers was given the responsibility of deciding who would go where. The success of this teacher-led strategy was evident when 95 percent of the teachers voted in favor of the new

spatial configuration. Still, the Principal recalled that the whole relocation process was "the hardest thing — so hard that we rested after this."

Other steps taken in 1997-98 included the appointment of a full-time Academy Facilitator and the naming of academy leaders. Information forums were held for all stakeholders, and students were surveyed to determine their academy preferences.

The Keystone and Capstone classes also started that year. Keystone is an orientation class for freshmen that introduces them to the Principal and administrative staff, engages freshmen in exploring their career preferences, teaches study skills and time management, and encourages students to get involved in the various extra-curricular and service activities available at SGP. In Keystone, all freshmen draft a six-year plan for high school and beyond, which clarifies what they need to do in order to get where they want to go. The Principal credits Keystone with a dramatic reduction in discipline referrals among ninth graders. Capstone is a culminating high school experience for seniors that involves more detailed career investigation, resume writing, communications and interview skills, student portfolios, college applications, as well as job shadowing and internships for some students.

To facilitate these changes, a great deal of staff development took place in 1997-98. Experts were brought in to help with the change process, curriculum design, and other specific issues. A team went to a conference of the National Career Academy Coalition and were surprised, said the Principal: "We thought we had invented academies — then we found out they'd been around for 29 years."

Along with the huge accomplishments of this first year, some problems surfaced that have still not been solved. One is the master schedule, which the Principal termed "in one word, a nightmare." Reasons for that will be explained later.

In the second year, 1998-99, staff development continued, including summer externships for some teachers to get first-hand experience in workplaces related to their academies. Teachers worked on integrating curriculum within

academies. Efforts to build community awareness brought 300 parents to freshman parent night, and an Academy Advisory Board was formed. The school unveiled its own web site, and co-hosted the annual conference of the National Career Academy Coalition. Indicators of student performance showed improvements in test scores and attendance, fewer dropouts, and more students taking challenging courses and college-entrance exams.

Year three, 1999-2000, saw the creation of a College and Career Center, rollout of new academy-specific courses, adoption of a new math curriculum, and a schoolwide approach to the teaching of writing. Professional development continued, including more summer externships. These efforts were rewarded by recognition as a mentor site by the High Schools That Work project, which links more than a thousand high schools in a campaign to raise student achievement by combining a challenging academic curriculum with career and technical education. Further recognition of the school's accomplishments came from the U.S. Department of Education, which in 1999 also honored SGP by naming it as one of only 13 New American High Schools chosen that year. Representative Martin Frost marked the occasion by entering a congratulatory statement into the Congressional Record (Vol. 145, No. 164, November 17, 1999).

These honors, and the evidence of improved student performance which warranted them, have helped to sustain enthusiasm for carrying out SGP's five-year vision. Several indicators of student performance at SGP have improved since the school organized itself into academies. According to the school's brochure, tenth grade scores on the Texas Assessment of Academic Skills showed the following trends:

	1998	1999	2000
Reading	90	91	95.1
Math	75	81	88.5
Writing	90	88	93

The Academy Facilitator in spring 2000 said this was like having "three straight winning seasons," though she was appropriately cautious about concluding that these results could all be attributed to the academies. The Chair of the English

Department thought that the school's new structure had "helped us raise the bar" for student performance. This is reflected by another positive indicator in the school's brochure: the number of Advanced Placement examinations taken by SGP students grew from 38 in 1997 to 69 in 1998, 167 in 1999, and 231 in 2000. In 2001 the school offered 23 different AP classes, eight more than before starting the academies. The principal also reported a 50 percent increase in students pursuing a Recommended or Distinguished Achievement plan, instead of the less-demanding Regular curriculum.

SGP has undertaken the task of transforming itself with very little additional outside funding. The High Schools That Work project did pay SGP $25,000 a year for three years to make itself available as a mentor site to other schools in that network. However, the principal feels that money is a major challenge; the district cut five teachers from the SGP payroll in 2000-01, and may cut another five in 2001-02.

Looking to the future, the principal concluded his March 2001 presentation by listing several remaining tasks envisioned in the five-year plan. These include creating an advisory board for each academy, expanding student internships, further upgrading career and technical programs, and involving more students in articulated arrangements for receiving college credit. He noted the following major challenges still to be overcome:

- master schedule
- student internships
- time for teachers to plan as teams
- additional high level career and technical education programs
- academy identity (sense of belonging)

These and other issues are analyzed in the following section.

Issues in Creating All-Academy High Schools

A. Creating Small Learning Communities

A.1. Should all academies have career themes?

In the current vision for SGP, academies with career themes are central. The focus on career themes is seen as a means to increase students' interests in their studies, including academic subjects. In a column entitled "Why Academies?" that appeared in a May 2000 newsletter to SGP parents, the Academy Facilitator wrote:

> "Planning for a career is a lifelong process that includes an awareness about who you are and the careers for which you are best suited. The Academies capitalize on student interests and aptitudes in order to provide a curriculum that will both challenge and motivate all our students. Electives are clustered to serve as a coherent sequence of courses that provide students with a focus as well as advanced knowledge and skills.
>
> "The Academy concept provides students with a sense of relevance across the curriculum. Too many students do not understand why they are in school, or how particular courses help prepare them for college or their careers. Academies provide that critical link."

SGP leaders are committed to inclusiveness. As the Dean of Instruction put it, "If it's [the academy model] good for 200 kids, it's good for 2000." They see academies as a way to avoid the traditional separation of students into college-bound and career-bound. In a workshop with teachers from SGP and three other schools in November 2000, the principal reaffirmed, "We're trying to prepare all students for college and careers — not 50 percent, all."

The joining of career/technical classes with academic instruction has been facilitated by moving some technical classes into the main building, to be physically adjacent to academic classes in the same academy. Although some career/technical classes could not be moved because of equipment — as of April

2000 cosmetology, automotive, and building trades were still located in the separate wing that previously housed all vocational classes — others had located with their academies: marketing in the Business academy, child development in Health, and industrial arts in the Math academy.

A striking and symbolic example of arts combined with technology was a display in the school's art gallery of highly imaginative sculptures assembled out of auto body parts.

A.2. How should teachers be recruited or assigned to academies?

When SGP made the transition to academies, all teachers were given forms to indicate their first and second choices, and to specify if there was one academy they absolutely did not want to join. Although systematic data on teachers' satisfaction with their academy placements are not available, interactions with numerous teachers during visits to SGP give the impression that the general level of satisfaction is high.

Some assignments were difficult to fill, however. For instance, no English teachers really wanted to be part of the Math academy. The English Department chair dutifully agreed to do it, and another English teacher came along with her. Despite her initial reluctance, the department chair as of November 2000 had become enthusiastic. A summer externship had given her a chance to see how English fits into the world of math, science, and engineering.

Nevertheless, some teachers still do not support the whole academy plan. When the principal was asked in March 2001 whether some teachers resisted the initial idea of joining an academy. He answered, "Yes, I had boycotters then, and I have boycotters now." But he added that a positive flow helps to smooth rough edges of rocks in a stream.

A.3. How should students be recruited or assigned to academies?

SGP has tried hard to give students their first choice of academy. Counselors, administrators, teachers, and students from SGP visit feeder schools in the fall and distribute information to eighth grade students, who must indicate

their academy preference in the spring. After enrolling, students may change from one academy to another, but they must wait until the end of the year. Students who enter SGP after the first trimester are enrolled in the Keystone class to learn about their academy options.

Giving students their first choices initially resulted in academies of different sizes. The approximate distribution of enrollment as of spring 2000 was: Arts 700, Health 700, Business 450, Humanities 250, Math 250. If the numbers of students choosing particular academies changed significantly over time, it would presumably be necessary to reassign teachers, and even to reallocate space within the building. However, it appears the distribution of student choices among academies has remained fairly stable so far. Assignment of new teachers, replacing any who leave, may be enough to accommodate small changes in academy size from one year to the next.

Although systematic data on student satisfaction are not available, conversations with students and staff indicate a widespread perception that choosing among academies has given students a way to sort themselves into compatible groupings. One student pointed out that students can work together more effectively on group assignments if they share common interests. The counselor in charge of the College and Career Center remarked in spring 2000 that academies tend to match students' and teachers' personalities: Arts is noisy, Math is quiet. In a separate conversation, the English Department Chair also described the Math academy students as not very expressive. The Dean of Instruction said in fall 2000 that a literature teacher in the Arts academy had sent her an email saying she was glad that her literature class contained only Arts academy students now: "they're all like-minded."

Students met during a visit in fall 2000 and discussed how academy themes may fit their preferences and aspirations:

- A boy who likes music, especially drumming, said he chose the Arts Academy because it is compatible with his interests and learning style. Arts teachers give students lots of videos. He also liked making a video for his project in pre-AP World History.

- A girl in grade 11 said she chose the Health Academy because she wants to be a music therapist. Two other girls said they were interested in health related work. One, a senior who said she enjoys hands-on learning, loved dissecting a fetal pig in her class on anatomy and physiology.
- In a freshman English class, two boys were not clear about why they had chosen the Math academy. Another boy said he wanted to work with computers. A girl said she chose Math because you can do anything if you know math, and not many girls did. There were only two girls in this class of about 24.

Data are not available to indicate whether the composition of students in different academies varies significantly with respect to gender, race/ethnicity, or level of academic performance. As a matter of policy, however, special education students are distributed among all the academies.

Not all students want academies. The English Department Chair observed in spring 2000 that some students would prefer to "float" through high school, and they must now choose between participating in an academy or being left out.

A.4. How many academies should there be?

Deciding on the number of academies requires balancing various tradeoffs. Having a larger number of small academies increases the degree of personal familiarity among students and teachers, and also makes it possible for more students and teachers to pursue their special interests. However, having a larger number of academies also increases the difficulty of constructing a master schedule that keeps academy students and teachers together, and makes it more difficult to find teachers who can staff specialized courses.

SGP has settled on five academies, ranging in size from about 250 to about 700 students. The intent is for every core class in English, math, science, and social studies for grades 9-11 to enroll students who all belong to the same academy. As affirmed by the principal, "We want academy courses to be academy pure."

Achieving this has not been easy, however. As already noted, the Principal said scheduling was a "nightmare," and an article in the Star-Telegram on May 30, 1999, also spoke of "scheduling madness" (p. 22). According to the Dean of Instruction, the first trimester of 1999-2000 was about 70 percent academy pure in the core classes of English, math, science, and social studies for grades 9-11, and 84 classes were 100 percent pure. The proportion of academy-pure classes was highest in ninth grade. In fall 2000 she estimated that 80 percent of the core classes were at least 90 percent academy pure. The teacher who had taken the lead in developing the Keystone curriculum reported that all Keystone sections were academy pure as of spring 2000, though Capstone classes still were not.

In a large academy, however, academy purity does not ensure that students and teachers will get to know one another well. A student may have different sets of classmates in different classes, even if they all belong to the same academy. And teachers may not work with the same students over a period of years, even if classes are academy pure: a senior in one of the large academies said he had not yet had the same teacher twice.

SGP is considering whether to try scheduling groups of 25 students as "teams" within academies. A team would take all core classes together. That would permit teachers to coordinate and integrate instruction across subjects, since they would be teaching exactly the same set of students. Teachers might also stay with the same student team for more than one year. These are important features of the academy model as developed in Philadelphia and California. In a workshop in the fall of 2000, the Academy Facilitator said SGP teachers were still wondering whether the focus should be on the academy or on a team of this kind. One teacher in spring 2000 said the team concept was being piloted that year with one ninth grade team in each academy. The school's commitment to team scheduling is uncertain.

Scheduling cohorts of students to take classes together is not the usual practice in American high schools (unlike other countries), and instituting such a practice is never easy. One common problem is that some students want to take Advanced Placement or other specialized classes, which conflict with one of their

cohort classes. This problem also exists at SGP, where Advanced Placement and gifted classes are outside the academies.

Other circumstances at SGP add to the difficulty of keeping classes academy pure, and even more to scheduling small teams to take several classes together. One complicating circumstance is the trimester schedule, which imposes constraints on classes that cover two successive trimesters. Another impediment to scheduling academies at SGP is that extracurricular activities, including competitive athletics, are scheduled in the middle of the school day. Some of these extracurricular activities are very important parts of the school culture. For instance, the SGP brochure mentions that the cheerleading team won the national championship in 1999. Cheerleading is a singleton class, so any student who wants to participate must sign up for it at the one time it is offered.

To avoid the "scheduling madness" of previous summers, the SGP leadership in 2000-01 decided to start the whole process earlier. New software called WinSchool is also being tried. These changes may help to achieve the goal of making all core classes academy pure. Whether SGP will try to schedule more students in teams of 25 remains to be seen. The planned opening of a separate ninth grade campus in fall 2003, on the site of a former middle school adjacent to SGP, may ultimately help to simplify scheduling at SGP, though in the near future it will also distract attention that might otherwise be focused on the challenge of scheduling.

A.5. Belonging to the academy versus belonging to the school

As SGP continues to build the academies, there is some concern about whether students' identification with their academies might overshadow their sense of belonging to the school as a whole. In his March 2001 presentation, the Principal told of a student who had worried whether establishing academies would destroy the schoolwide spirit of SGP, asking "Are we still going to be Warriors?" Although no systematic data are available on this question, conversations with students suggest that they are beginning to develop an identification with their academies, but Warrior spirit is still strong.

For instance, in a Keystone class visited in spring 2000, students from Humanities (one of the smallest academies) said the academy is "like a second home" where they are "with the same teachers every day" and they can "joke around and stuff." Even in the larger academies, students at least knew which academy they were part of, and favorable student comments about the special character of their academies were not uncommon.

At the same time, students still have important contacts with others outside their own academy, through elective courses and extracurricular activities. Students also commented that they valued these non-academy contacts. One student's reference to the Coliseum (indoor gym) as the "heart of the school" may be revealing.

It may be possible to further strengthen academy identity without undermining school spirit. There was some talk about assigning counselors to academies, for instance, instead of the current practice of assigning them to students alphabetically.

B. Curriculum and Teaching that Prepare Students for College and Careers

SGP has described various possible course sequences for students in an admirably clear and comprehensive publication entitled "Academy Pathways." Within the five academies, the following different pathways are possible:

- Pathways in the Business and Computer Technology academy:

Accounting and finance
Administrative services
Computer information systems
Marketing and general business
Graphic arts

- Pathways in the Communications, Humanities and Law academy:

Communications/media
Government, public services and law

- Pathways in the Creative and Performing Arts academy:

Visual art
Instrumental music
Vocal music
Theater arts/dance

- Pathways in the Health Science and Human Services academy:

Health and medicine
Environmental science
Human services
Hospitality and food science

- Pathways in the Math, Science and Engineering academy:

Engineering and computer science
Industrial, construction, and transportation.

For each pathway, the publication lists a coherent four-year sequence of courses, including electives as well as requirements. Every pathway allows students to fulfill requirements for the Distinguished Achievement Program or the Recommended Diploma. The Regular or Minimum Diploma is also an option, but SGP is encouraging students not to settle for that. This "Academy Pathways" document demonstrates the clear vision, creativity, and careful thought that have gone into planning the academies at SGP.

B.1. Roles and responsibilities

SGP has created a clear division of labor and line of authority for academies and departments: the Academy Facilitator coordinates the academy leaders, and the Dean of Instruction coordinates the department chairs.

To coordinate the effort of transforming SGP into an all-academy school, a full-time position was created for an Academy Facilitator. The person appointed to this position was a math teacher whose children had attended SGP. Significantly, SGP received no additional funding to support this position. Instead, other teachers absorbed the students who would have been in this teacher's classes. Academy directors report to the Academy Facilitator, thus leaving the normal administrative positions in place to perform the usual

functions at a large high school. Appointing a full time person, from the teaching ranks, to this position has helped keep academies connected to the central administration. The Facilitator can advocate for proper scheduling and equitable resources. She can organize activities across academies. Her position seems to be a buffer against too much independence and competition among academies.

Unlike some other all-academy schools, SGP also has retained its subject-matter departments. These are seen as complementing the academies. In an interview with a group of department chairs and academy leaders on 4/13/00, the English Department Chair said she could keep her "head in the classics" while academy teachers are engaged with the world outside school. The leader of the Business academy affirmed that it was good to check with department chairs in developing new curriculum. Another academy leader joked to the department heads, "You all are the police." The English Chair replied, "You have the methodology" for translating subject matter into effective instruction.

According to the Dean of Instruction, academy leaders are given one release period during one trimester each year, plus a stipend. Department heads receive a stipend but no release time.

Equipping SGP teachers to work in academies has required a concerted professional development effort over a period of years. This started with sessions about understanding the process of change, generally. The next topic was teamwork. Then teachers in each academy worked on curriculum mapping, drawing up their course sequences on big charts. For non-vocational teachers, relating their subject to the career academy theme was not easy. To help with this, SGP organized externships for teachers during the summer. In 1997, 25 teachers participated in unpaid internships or job shadowing for one to three days. An additional 25 teachers had this experience in 1998. In 1999, the local school-to-work partnership funded paid, five-week positions for 40 teachers. Two-week internships were planned for 2000.

Running an academy requires teachers to take on responsibilities beyond their regular classroom work. These include recruiting students; coordinating curriculum across different classes; arranging for speakers, field trips, and other activities related to the academy theme; giving extra help to students who need

it; and overseeing students' academy-related work experience. At SGP, academy teachers do not have an extra or common planning period each day, but they are scheduled to have their lunch at the same time, and some do use this time to discuss academy business. Academy meetings are also held on the first Wednesday of each month. Some teachers commented that these times are not sufficient to accomplish the extra tasks involved in academies, and as a result they are using more of their personal, unpaid time for school-related work. Academy leaders were said to be especially taxed, despite their one-trimester release period. These burdens are likely to increase as, according to the plan, each academy forms its own advisory committee and more students participate in internships.

B.2. Teaching and learning at high standards

Content standards in Texas are spelled out in the Texas Essential Knowledge and Skills (TEKS). The state has approved course descriptions and specified course requirements for the Minimum, Recommended, and Distinguished Achievement Program diplomas. Student learning is monitored by the Texas Assessment of Academic Skills (TAAS), given three times a year. Students must pass the test in reading, math, and writing before they can receive a diploma. As of November 2000 Texas was adding another test — "TAAS 2" — in English, American History, and algebra/geometry, which students will also have to pass before receiving a diploma.

The Principal explains how subject matter departments at SGP are intended to work with academies to help students achieve high standards: "The department chairs are working with the teachers within the departments on making sure that the TEKS are covered in each of the classes.... The academy leaders are working with teachers within their academies on 'flavoring' the content to the interests of those particular students in that academy."

An example of such "flavoring" was observed in a ninth grade English class in the Math academy. The teacher had discovered through her summer externship that engineers seldom if ever write essays, although essay writing is the most common kind of composition taught in high school English. Accordingly, she had designed a lesson around building a model tower —

suggested by the building of a windmill in Animal Farm, which the class had recently read — and was then going to ask students to write the technical specifications for building their tower. Technical writing is much more widespread than essay writing in the world of engineering. The intent was to satisfy some of the TEKS through a kind of writing that was related to the academy theme.

C. Work-Based and Experiential Learning Connected to Classroom Studies

Experience with career academies in other high schools has shown that internships are a powerful feature for many students. In addition to providing wages, internships can convince students that academic skills are important, and can get them excited about future career possibilities.

SGP's design for experiential and work-based learning calls for freshmen to hear outside speakers, sophomores go on field trips, juniors do job shadowing, and seniors have internships.

The use of outside speakers was increasing, and a school data base contained 155 speakers' names as of spring 2000.

Creation of an internship system for large numbers of students is a task that still lay ahead as of 2001. Availability of students' time is not the problem, according to the Dean of Instruction, who pointed out that seniors have time in their schedule for internships because a full-time course load would accumulate 30 credits in four years, but the district only requires 24. Some seniors were doing internships as part of the Capstone class, and others had internships arranged through Clinical Rotation class at Grand Prairie High School. However, as of spring 2000 most juniors and seniors did not yet have opportunities to participate in job shadowing or internships, and some students were complaining about that, according to one of the academy leaders.

One anticipated step is to create an advisory committee for each academy, in part for the purpose of expanding internships and work-based learning. As of 4/13/00 SGP still had one Academy Advisory Board for the entire school.

The desired expansion of work-based learning is likely to require allocating some staff time specifically for that purpose. How that might be funded is uncertain.

Promising Practices

Among the many significant accomplishments that have been described at SGP, two practices may be considered especially promising. First, the creation of a position for an Academy Facilitator has helped to sustain momentum for change, to provide a channel for communication among academies and with central administration, and to coordinate the many large and small decisions that have to be made. Second, the "Academy Pathways" document is a model of clarity, and provides a consistent logical framework for students and teachers to organize their coursework.

V. West High School, Columbus

Overview

West High School in Columbus, Ohio, is located in an older, predominately white, blue collar, lower income community. Many families have lived in the area for two or three generations, but there is also a transient population with nearly one third of the students moving each year. The school has approximately 1250 students. Most students are from the neighborhood, but Columbus Public Schools has open enrollment so about 200 come on buses from elsewhere in the city. The school is 30% African American, 60% white, and 10% Somalian. Many students do not speak English and both the Hispanic and Asian population are growing. West also has a large number of Special Education students.

The effort to become an all academy school began in 1998 through a Workforce Development Initiative begun by the Columbus Chamber of Commerce. Local businesses identified employability skills in the workforce as the number one issue in the community. Graduates of Columbus schools were not prepared for either college or careers, and the dropout rate was high. At that time, for example, the dropout rate at West was about 45% across four years. Forty percent of the ninth graders did not make it to the senior year.

While the Chamber and local community partners were developing plans for high school academies in Columbus Public Schools, Steve Oldham came to West as a new principal. At that time there were several "pull out" programs serving a small number of students. Mr. Oldham closed those programs, and he and the staff committed themselves to whole school reform with innovative programs for all students. West and the district investigated *High Schools That Work* and the Southern Regional Education Board (SREB) as a method of school reform. SREB criteria are often cited as the source of school reform efforts at West; the school is part of the *High Schools That Work* network. A team of teachers and administrators also visited *Talent Development* schools in Baltimore and attended a related conference of the Center for Research on the Education of Students Placed At-Risk (CRESPAR) at Johns Hopkins University. CRESPAR's

Talent Development is a model that places all grade 10-12 students in career academies while instituting a ninth grade program called *The Success Academy*.

Issues in Creating All-Academy High Schools

A. Creating Small Learning Communities

A.1 Should all academies have career themes?

The Chamber committees and the district office selected and co-sponsored two academies at West:: Information Technology and Business. A Health Science Academy was added later and is also district sponsored. Teachers and community leaders who saw a need for a different kind of academy also began an Arts/ Communication Academy, although it is scheduled a little differently. This year it also became a district-sponsored program.

The principal has worked hard to make all four academies equitable in terms of the number of students and the resources available. The student numbers in each academy in 2000 – 2001 was well balanced. For the tenth grade level in 2001 – 2001 each academy received sixty slots. Eighty percent of the slots were filled during an evening sign-up event for students and parents. They were informed that placement would be based on the order of sign-ups. Interest was fairly even, although Info Tech filled up first and was closed, requiring students to take their second choice. This did not create serious problems.

Without the career themes it would be difficult to obtain community support and link with post secondary partners. The career themes help students and parents make decisions, provide the structure for course sequences and small learning environments, and direct the involvement of business partners.

A. 2 How should teachers be recruited or assigned to academies?

The principal developed the academies through a strategic plan. In 1999 West staff attended the *HSTW* conference and visited *TDHS* schools. From such initiatives, they returned with ideas for reform and improvement of West High School. The resulting plan was a blend of the best ideas and practices they

observed. All staff were informed that changes would be taking place and these changes were carefully described and discussed in a series of faculty meetings. Nearly all staff members participated in writing the district required "100 Day Plan" that led to the first academies. All faculty were encouraged to critique the plan. The principal also involved the Columbus Education Association in the planning process and gained support through the union senior faculty representative, who is the lead teacher in the Health Sciences Academy.

From the beginning the principal encouraged those who were not interested in participating in these changes to seek employment elsewhere – either in the Columbus district or elsewhere. Teachers were given three years to decide on a change. As teachers left and new staff was needed, individuals were hired who understood and liked being part of a school on block scheduling, moving toward schoolwide career academies. Thirty-six new teachers have been recruited and hired during the past three years.

In 1999 a pilot group of ninth graders was enrolled in the Freshman Success Academy. Teachers were encouraged to volunteer, and a volunteer staff was put in place. Through grant funds some ninth grade teachers were given additional released time, and a tutoring program was established after school. A common planning period was provided for the four lead teachers, and efforts were made to accommodate planning time for others with class coverage, stipends, and after school meetings. Staff morale was good.

However, in 2000 – 2001 the ninth grade academy teachers experienced some discontent. Working with the ninth graders proved difficult. Some teachers requested transfers from the ninth grade; some applied to other schools. Time for planning and collaboration was provided during ninth period every day for the entire team through an ELO grant. After school tutoring was also available for struggling students. Those few teachers who were not provided common planning time were compensated at the hourly rate to meet after school.

Staff in the four academies with tenth graders were mainly volunteers or new teachers hired for the academy. The Business Lead Teacher was chosen by the principal to replace a less interested leader. She is enjoying her role because she knows she can impact change. However, the lack of common planning

periods is problematic. The four academy lead teachers have common planning periods, and they met a minimum of three times a week, but coordination for the rest of the tenth grade team was difficult. There also appears to be a lack of connection between the career theme and the academic classes in some academies. Improvement on this count is a goal for next year. Teacher summer externships should assist academic staff in infusing career information into the core subjects.

With half the faculty in academies (in ninth and tenth grades), the other half has begun to feel left out of the major reform efforts. Some teachers who were reluctant to be involved in academies are now eagerly awaiting their involvement as the academies expand to eleventh grade. There are also still teachers who do not want to teach in an academy and do not want to change schools. However, giving faculty information on what is occurring, time for input, and a feeling that they are part of the decision making process has eased the transition at West. Allowing teachers to volunteer and having the opportunity to hire new staff has also been valuable. A remaining issue is teacher turnover. The lead teacher for the Information Technology Academy has recently left the school for another position. Although he mentored a replacement, he filled many roles and his departure leaves a void.

A.3 How should students be recruited or assigned to academies?

Ninth grade students are randomly assigned to the Freshman Success Academy, which is housed in a separate part of the building. All ninth graders are required to take a district-designed course, Career Connections, which introduces them to a range of career choices before they select an academy focus in the spring. There is a month focused on preparing students to chose their academy. In addition, parents and students are invited to an academy sign-up meeting where most make their selection. Parents must sign a support form for the student's choice.

The academy lead teachers have developed a procedure so that students can change academies only once – after the tenth grade, at the beginning of the junior year. A student must submit a form signed by their parents or guardian and write a one-page essay stating the reasons for the change. The student then

meets with the lead teacher to discuss the reasons for the change, the academy to which they wish to transfer, and the related benefits. The lead teachers communicate with one another, other academy staff, and parents to make sure all understand the reasons and process. Lead teachers keep track of the number of changes and reasons and use this in planning for improvements.

A.4 How many academies should there be?

West has approximately 1200 students, about 300 of whom are ninth graders. The decision to have four academies for grades ten through twelve was made jointly by the principal and the district office. The principal believes no academy should have more then about 60 students per grade level so that a caring adult knows every student. The numbers vary at the junior and senior level to accommodate all students. For the 2001-2001 school year, each academy was assigned 60 slots for tenth graders. As these were filled, students were placed in their second choice. Counselors make an effort to schedule students into academic core classes as a cohort and keep academy students together.

A.5. Belonging to an academy versus belonging to a school.

According to juniors and seniors interviewed for a *High Schools That Work* report in April, increased expectations for academy students have spread throughout the school. One senior said, "I can't mess around like last year. I have to come to class and work." However, even though the academies are central to the reform at West, students are connected to the school as a whole and refer to themselves as a "West Cowboy" rather than an academy student. A tour of the school shows a wide variety of activities and student involvement. West is a neighborhood school with an active alumni group and popular sports teams. Since the four academies are in the first year of operation, they have not yet developed the team spirit and camaraderie of veteran academies.

B. Curriculum and Teaching that Prepares Students for College and Careers

B.1. Roles and responsibilities

The principal has empowered academy lead teachers at West to make decisions and act as instructional leaders. They are responsible for planning, collaborating with their teams, attending steering committee meetings, and working closely with the administrator assigned to the academy. A different assistant principal is assigned to each academy. Lead teachers communicate on a regular basis with these administrators to solve problems, plan for program improvement, and coordinate with the other academies. Although not all academy teachers have common planning time during the day, funds are available for after school meetings once a week.

The four academy lead teachers are responsible for student recruitment, meeting with parents, and student data collection. Counselors work with the lead teachers and administrators to schedule students into the correct cohort. All academy teachers are responsible for career guidance, although little professional development has been available in this area, and the level varies from one teacher to another. Lead teachers are also responsible for informing team members about the summer internships and coordinating that activity with the Chamber and district.

The lead teachers attend all Chamber sponsored steering committee meetings and help plan for guest speakers, field trips, and job shadowing. Both district and Chamber staff support these events. The Chamber is developing the mentor program and internships for students.

Department chairpersons and lead teachers are beginning to work together. In the past they met separately. An Interprofessional Communications Committee (ICC), which meets weekly, has been established to coordinate the work of chairs and leads. Administrators also participate in the meetings. The ICC has improved communications and will continue to work with procedures, differing roles, and strategies during the 2001 – 2002 school year.

Administrators are responsible for the Summer Bridge, which is a ninth-grade transition program for middle school students who are in need of extra help in order to succeed in high school. Those students who succeed in the Summer Bridge enter the Freshman Success Academy. Those who fail or do not participate enroll in the Acceleration Academy. This is for students who fail two or more areas on the state proficiency test, have excessive absences, fail two or more academic courses, and read two or more years below grade level. Students attend school from 2:00 pm to 5:45 pm daily and can earn 2.5 credits. Funds to pay Acceleration Academy instructors are provided by the district.

B.2 Teaching and learning at high standards

To accommodate the move to academies West has adopted a four –by-four block schedule which allows students to take one additional course each year. Starting with the school year 2002-2003 all students will be required to complete a college preparatory program of study with a career endorsement. West will use the *High Schools That Work* guidelines along with three credits in a foreign language to define these requirements.

Ninth grade students are required to take Career Connections, a course that introduces them to different career choices before they select an academy. In addition, all freshmen must complete a computer literacy course. There are over 500 computers at West, and students frequently use the Internet for research and reporting. The school has fully equipped computer labs for mathematics, business, and technology.

Teachers are infusing the Ohio State Standards into their curriculum and using curriculum developed by Columbus Public Schools to improve student achievement. Professional development to assist academic teachers in relating the career theme to academic content is planned for the 2001 – 2002 school year. Some teachers will participate in paid summer externships with supporting businesses.

C. Work-Based and Experiential Learning Connected to Classroom Studies

C.1 How to achieve economies of scale in work-based and experiential learning?

The challenge of successfully meeting the demands of the third defining feature of a career academy – strong partnerships with employers, community, and post secondary education – is being met in the academies at West High School through support from the Columbus Greater Chamber of Commerce. The Chamber operates as an intermediary providing job shadowing, guest speakers, and field trip sites. As the academies move into the third and fourth year of operation, the Chamber will also link students with mentors and internships.

Chamber staff is assigned to meet with academy steering committees, work with academy teachers and administrators, and link academy needs to community resources. A Chamber employee is responsible for finding and training mentors for all juniors.

Through a comprehensive and systematic workforce development effort, leading employers, government agencies, and the Columbus Public School System, as well as Franklin University, Ohio State University, and Columbus State Community College are working with the Chamber to ensure that students receive high quality education which prepares them for both employment and postsecondary options.

Five project teams met for two years to plan the career academies, organized around employment opportunities in customer service, manufacturing, construction, logistics, and information technology. Teams examined national, state and district standards and developed a plan for student learning with academic and technical requirements in a sequence that included high school requirements and college courses. Where available, national skill standards were incorporated. The plan for the three-year academies included college preparatory math, science, technology, and language arts with applied learning in the career path. Students have the opportunity to take college-level courses related to their field. The project teams also planned for internships (paid), mentorships, job shadowing, field trips and guest speakers. Those

students who graduate on time can earn up to a year's worth of college credit and a pledge of a job offer from industry.

C.2 *Modifying the design of work-based and experiential learning to accommodate larger numbers of students.*

West High School has four academies and four steering committees. Each committee meets once a month at the school site. The committees are chaired jointly by representatives from industry and education. The Chamber is responsible for sending meeting reminders and distributing the meeting minutes and agendas. During this first year at West, partners provided guest speakers on a regular basis, and students took several field trips. The Health Academy students visited the local hospital, and committee members assisted students in an integrated project. Information Technology students were visited by a team from local Information Technology companies to discuss what is needed for success in that workplace. The lead teacher and members of the committee coordinated workbased learning experiences tied to classroom instruction. Some experiences were more successful than others; workbased learning is new to some academic instructors as well as business partners.

The Chamber is assisting Academy teachers in learning about career fields and developing work-based learning that is related to academics. During the summer of 2001 the district and the Chamber worked together to provide 38 weeklong teacher internships. Half the cost was paid by the district; half by the Chamber, with funds from participating businesses. Teachers began the week with a day of orientation followed by three days at the worksite rotating through different departments. The fifth day teachers met with their teams to develop workbased-learning instruction. A guide, Helping Teachers Connect Academics to the Workplace, from Ohio State University, was used as a resource.

Nationwide Insurance Company is playing a leading role in providing work-based learning experiences for West. They are providing internships to give students an understanding of business etiquette and communication, project management, and team building skills. Nationwide has also committed to providing 65 mentoring positions.

Promising Practices

Reforming West High School so that all students are involved in high quality career academies with a challenging college preparatory curriculum is the goal of this Columbus high school. For those considering a move to an all academy high school two "best practices" are worth examining. The first is the use of the Chamber of Commerce as an intermediary in planning and conducting workbased-learning experiences for a large number of students. The second is the deliberate process the principal used to involve all stakeholders in planning for change. The support of the Chamber provides a community structure which enhances work-based and postsecondary opportunities for West's students. The support of the staff provides a strong school based environment to increase student achievement and teacher satisfaction.

VI. Self-Assessment Guide for Career Academies

In order to assess how completely the academy model is implemented in any given situation, and to connect the degree of implementation with the amount of improvement in student performance, two kinds of information can most easily be used. First, judgmental data can be collected by academy staff or outside observers, to assess implementation of the whole range of academy features. Second, the kind of student data normally kept by schools and districts can give a picture of who is enrolled in academies, whether their course-taking experience is consistent with the academy model, and how their performance is changing.

To assist in collecting judgmental data, this *Guide* begins with a combined *Self-Assessment Checklist and Scoring Guide*. The three sections of this (Small Learning Communities, College Prep Curriculum with a Career Theme, and Partnerships with Employers, Community, and Higher Education) derive from the definition of career academies agreed to by the organizations working to support career academies nationally.

The purpose of the *Checklist* is twofold. One is to get an indication of how well the academy stacks up against nationally defined criteria for quality implementation. To calculate a score, check the circle corresponding to the point value for each indicator and add the points to determine the score. There are 20 indicators in all; thus the top score possible is 100. If the academy is not yet fully implemented, some of the items will be inappropriate (e.g., post-secondary plan, mentor/ internship/ community service programs), and the scoring needs to be adjusted accordingly.

A second and perhaps more important purpose of the *Checklist* is to identify each academy's relative strengths and weaknesses and initiate a process of reflection and improvement. Notes concerning each indicator can be included, such as what parts of the component are well implemented or need attention, and what needs to be done to bring improvement. Comparisons can be made among the three sections and the components within each to see which features are strongest and weakest. This process is best done by an academy team so the teachers, administrators, and business partners involved can explore options and define paths toward improvement.

A second section on *Analyzing Student Data* includes suggestions for compiling and analyzing commonly available data for measuring academy implementation and effectiveness. This can answer three kinds of questions:

- Demographics—Do academy students represent a cross section of the school?
- Academy experience—Does student course taking reflect the academy design?
- Student outcomes—Are academy students showing improved attendance, retention, credits, grades, test scores, graduation rates, and college entrance rates?

As explained in the section on *Analyzing Student Data*, these questions can be addressed by:

- Comparing snapshots over time for an individual academy,
- Analyzing year-to-year changes for individual students,
- Or possibly relating academy program characteristics to student performance.

Career Academy Self-Assessment Checklist And Scoring Guide

Checks can be entered in one of five "level of implementation" circles for each indicator on a continuum from 1= no implementation to 5 = full implementation. Scores should be determined using the criteria in the scoring guide. For example, if none of the criteria listed in the scoring guide have been met, circle 1 should be checked. If all the criteria listed have been met, circle 5 should be checked.

Choices should be based on the knowledge of the academy and the sense for how fully achieved each aspect of the program is, given what is possible at the high school and how serious any problems are. For example, if there are only 90 students in the academy across three grade levels, but this is as large as is realistically possible in the high school, this can be considered a 5. Conversely, if there is a mentor program in place but it is poorly run or serves only a small fraction of students, this might receive a 1 or 2.

Small Learning Community

• Grade levels/courses—Minimum of two grade levels (11-12), preferably three (10-12) or four (9-12), are included; minimum of two academic classes/ year (three or four optional) are included; one career/technical class is included/year; a written course sequence exists; academy students have same options for non-academy courses as others at high school.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Student selection, academy size—Students are informed of the academy by the semester before they enter; students must apply; students selected reflect the high school's demographics; at least 30 students, and not more than 120, are enrolled at each grade level; student demand for the academy is sufficient to fill all available slots; attrition removes less than 50% of original enrollees by graduation.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Teacher selection, roles—Teachers choose to participate; teacher replacements are guided by the academy team; a majority of academy teachers' classes are in the academy; academy teachers relate their subject to the career theme in at least 10% of their classes; academy teachers relate their subject to other academy academic subjects in at least 10% of their classes; teachers share additional academy responsibilities (e.g., Steering Committee, student recruitment, employer involvement, parent contacts, student counseling).

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Administrative support— At least one release period is provided the lead teacher; a release period is provided for one or more additional academy teachers; compensation is provided for extra time required; the superintendent mentions academy positively in public forums, helps recruit employers; the high school principal, other administrators, provide academy teacher release time, professional development, and cohort scheduling; teachers judge the academy facilities, equipment, and curricular materials to be adequate.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Counselor/scheduling support—Counselors can explain what cohort scheduling is; the master schedule indicates which classes are in the academy; all academy classes are comprised of at least 80% academy students; academy classes are scheduled back-to-back (if needed); there is a counselor identified to work with each academy.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Enrichment features—Teacher tutoring is available (if needed); student peer tutoring is available (if needed); student achievement is recognized publicly at least quarterly; at least one academy social event is held per semester; at least one academy recognition ceremony is held per school year for all academy students, teachers, counselors, administrators, parents, and business partners.

Level of Implementation: 1 2 3 4 5
O O O O O

Notes:_____

_____

Subtotal Score:_____

College Prep Curriculum With a Career Theme

• Standards, assessment—Curriculum and instructional materials in all academy academic subjects are explicitly based on state or national standards; curriculum and instructional materials in career related classes are explicitly based at least partially on an industry source; SCANS skills are incorporated and assessed; assessments are multiple and reflect practices in the career field.

Level of Implementation: 1 2 3 4 5
O O O O O

Notes:_____

_____

• Academic courses—The academy course sequence, combined with electives available to academy students, meet requirements for admission to the state's public universities; student performance is tracked in terms of attendance, credits earned, grades, and test scores; flexibility is provided for students with special needs (e.g., English language learners, special education students, honors and AP eligible students).

Level of Implementation: 1 2 3 4 5
O O O O O

Notes:_____

_____

• Career/technical courses—There is a written course sequence across the years of the academy; local employers from the career field help to guide the curriculum in these courses; students can demonstrate knowledge of a broad range of careers and related educational requirements in the academy's career field; the sequence of career/technical courses enables students to obtain a skill certification recognized by employers.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Curriculum integration—Students can demonstrate how each of their academic subjects is relevant in the career field; students engage in projects requiring the application of skills from several courses; these include a senior and/or capstone project; such projects are assessed at least in part by business partners from the career field.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Teacher coordination of curriculum—Academy teachers have regular meeting time, at least weekly; this occurs during a common planning period; academy teachers can identify at least one project per semester which requires students to integrate curriculum between academic subjects and the academy career field; teachers are provided staff development support for these efforts.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Work based learning—The academy provides options through which students can learn in work based settings (e.g., job shadowing, mentorships, internships); such experiences are incorporated into classroom lessons; each academy student formulates a plan for postsecondary education and employment and discusses the plan annually with a teacher or counselor.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

• Postsecondary plan/links—All academy students develop a written post-secondary plan by the end of their junior year; they have access to a career library and counseling in this process; they are exposed to two- and four-year colleges through visits and information meetings; there are articulation agreements between the academy and local postsecondary programs and institutions; academy students have the option of earning some college credit while in the academy.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

Subtotal Score:_____

Partnerships with Employers, Community, and Higher Education

• Career field selection—The academy career field is selected with input from local employers; a number of such employers support the academy (e.g., as Steering Committee members, speakers, field trip hosts, mentors, and internship supervisors); the industry is growing and offers well paying career options with upward mobility.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Steering Committee—The academy has a Steering Committee comprised minimally of teachers, administrators, and employers (it may also include parents and students); this committee meets regularly, minimally quarterly, with a defined agenda and clear outcomes; this committee helps to provide curricular input, speakers, field trip hosts, mentors, and internships; at least some committee task forces are headed by business partners.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Parental involvement—A parent or guardian signs each student's application to the academy; a parent or guardian is available for contact by teachers for each student; at least 50% of academy students' parents or guardians attend academy recognition events; parents are also involved in other appropriate academy activities (e.g., Steering Committee, field trips, social occasions, volunteer aides).

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Sophomore business speakers/field trips—At least two speakers per semester from business partners describe their employer's products/ services and range of jobs; at least one student field trip per semester takes sophomores to places of employment in the academy career field; these experiences are linked to the curriculum.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Mentor program—Juniors have a volunteer employee who serves as a career related mentor; there is a process that pairs students with mentors who are well matched; a staff member coordinates this program; mentors receive an orientation for this role; a series of experiences is planned throughout the year; a mechanism is in place to deal with problems; both students and mentors evaluate the experience at the end of the year.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Junior/senior internship program—The summer following junior year, and part-time the senior year, students have a job with a cooperating employer; students are matched with appropriate positions; there is a written plan to guide this experience; students are exposed to a variety of positions and learn their requirements/ training; a staff member coordinates this program, checks on students during the internship; students and supervisors complete a written evaluation at the end of the internship.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

• Community service, school-based enterprise—If an internship is not available for all students, there is an option of an unpaid community service position or role in an academy operated business; there is a process to match students with appropriate roles/positions; a staff member coordinates these programs, checks on students involved; these experiences are linked to the curriculum; the student and supervising adult complete a written evaluation at the end of the experience.

Level of Implementation:	1	2	3	4	5
	O	O	O	O	O

Notes:_____

_____

Subtotal Score:_____

Total Score:_____

Analyzing Student Data

This is a companion to the *Checklist and Scoring Guide*. The procedures described here are designed to guide the analysis of student data. The two approaches are most effective when used together.

Three kinds of information about students are especially useful for academies to consider: 1) demographics, 2) measures of academy experience, and 3) outcomes.

1. Demographics. These provide a picture of the students enrolled in the academy. Suggested categories here: age, grade level, gender, race/ethnicity, grade-point average prior to academy entry, and standardized test scores. In order to ensure that each academy enrolls a reasonably representative cross-section of the school's students, the characteristics of academy students should be compared with characteristics of non-academy students at each grade level.

2. Academy experience measures. These provide information on the extent to which students are participating in the academy curriculum. Although the academy lists a set of courses to be taken by academy students at each grade level, conflicts in scheduling may prevent some academy students from taking some of the academy courses. The proportion of intended academy courses that a student takes at each grade level, or over the duration of the whole program, is an indicator of the extent to which the student has actually participated in the academy curriculum. This proportion can be averaged across students to give a measure of curricular integrity for the academy.

   Another indicator is the proportion of students in academy classes who are actually academy members. In theory, academy classes consist entirely of academy students. However, in practice the complexities of scheduling sometimes result in non-academy students being included in academy classes. This may dilute the effectiveness of the academy program. It is possible to measure the "purity" of each academy class as the proportion of students who are members of that academy. That proportion can be averaged over academy classes, giving a measure of the average purity of classes in the academy.

3. Outcomes. These provide information on academy student performance. Outcomes to be measured each year include: attendance (percentage of days attended); dropouts (for students who leave their high school, to determine whether they transfer to another high school, formally drop out, or simply disappear); credits earned toward graduation; grade for each course taken (to determine students' GPA); scores on standardized reading and math tests administered by the high school; for twelfth graders, whether the student graduates on time; and for twelfth graders, whether the student qualifies for admission to four-year colleges.

All or most of this information is usually available from computerized data bases maintained by school districts. The only special requirements are that "flags" be attached to each academy student, and to each academy course, indicating the academy to which they belong. This information can be used in various ways. To illustrate the possibilities, here are three different approaches.

1. Comparing snapshots over time, for an individual academy. All three kinds of information — demographics of academy students compared to the host school, academy experience measures, and student outcomes — can be compiled each year, for each grade level. Comparing these measures from one year to the next — for instance, information on this year's twelfth graders compared to last year's — gives a direct indication of whether the academy is improving over time. However, changes in student outcomes *may* be due to differences between this year's and last year's students that are not accounted for by the available demographic information, so results must be cautiously interpreted.

2. Comparing year-to-year changes for individual students. The performance of this year's twelfth graders can be compared to their own performance in eleventh grade. This is a more direct measure of improvement in student performance, but it requires being able to link information for the same student in different years. If this can be done, the average change for students at each grade level, compared to their own previous performance, can be computed each year as an indicator of academy effectiveness. This measure of students' year-to-year progress can also be compared over time for each academy, as an indicator of whether the academy is becoming more effective.

However, if the data show changes in academy effectiveness, the program features that cause these remain to be explained.

3. Relating academy program characteristics to student performance. The most powerful use of this information is to support a systematic process of continuous improvement. For this purpose, it is most helpful to compare similar information from a number of different academies. Correlations can be computed between students' year-to-year progress and various academy characteristics, including the "academy experience measures" described above. Statistical adjustments can be made to take account of any changes in student demographics. This kind of analysis can provide practical guidance by identifying programmatic variables that may cause student performance in some academies to improve faster than in others.

Additional Options. All of these analyses can be done with information that is usually available in district data bases. However, if additional data collection is possible, more extensive evaluations could add data on measures such as: student disciplinary actions (e.g., detentions, suspensions, expulsions); awards; SAT/ACT scores; college applications/ acceptances; and post-graduate plans. The purpose is to see whether academy involvement improves these. Comparisons with non-academy students in the same high school, or changes over time, can provide a basis for analysis. Student (and teacher) questionnaires can be used to gather information on education and career related activities and attitudes. Students can be followed up at one or more points after graduation to determine whether they go on to some form of college or work, and how they do in these pursuits.

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Organization/Address: Career Acad Support Network, 230 Main St. Nevada City CA 95959

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